

NOVATO FIRE PROTECTION DISTRICT FIRE LOSS MANAGEMENT DIVISION



Developed by *Forrest M. Craig*
Forrest M. Craig, Fire Marshal
Approved by *Jeffrey A. Menden*
Jeffrey A. Menden, Fire Chief

Fire Protection Standard 310

FLAMMABLE LIQUIDS TANK REMOVAL

Date: 12/31/01

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This Standard has been developed for the purpose of flammable and hazardous liquids tank removal or abandonment. The Standard reflects the minimum fire and life safety requirements. Pursuant to Uniform Fire Code Article 79 and nationally recognized standards as adopted by Ordinance by the Novato Fire Protection District.

I. PERMITS

- A. A Fire District permit shall be obtained from the Fire Loss Management Division prior to the removal or abandonment of any underground tank.
- B. A notification form to remove underground storage tanks and/or excavate contaminated soil shall be submitted to the Bay Area Air Quality Management District.

II. GENERAL

- A. Excavation area to be cordoned off and barricaded with wire fencing or equal, at least six feet high, to prevent pedestrians from entering pit or excavation area.
- B. “No Smoking” signs and “Caution Flammable Vapors” signs shall be clearly posted bordering the excavation area and shall be visible for a minimum distance of 25 feet.
- C. At least one fire extinguisher with a 40BC rating shall be within 75 feet travel distance and readily accessible.
- D. All product, vent and vapor return piping shall be removed from tanks and properly secured. Piping may not be abandoned in place.
- E. Tanks shall be pumped free of all liquid storage prior to cleaning.
- F. Cleaning and removal of tanks shall comply with the NFPA standard number 327.
- G. All liquids and materials removed from tanks shall be transferred in an approved manner by a licensed waste removal company and apparatus.

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- H. Tank vapor readings of the Lower Explosive Level (LEL) and Oxygen percent (O₂) shall meet the minimum specifications listed below:

LEL	and	O ₂ %
10 or less		15 or less
15 or less		6 or less

To accomplish proper cleaning, LELs and O₂ readings, it has been found from past experience to require at least the following:

1. Tanks shall be filled, purged, and triple rinsed with water or steamed cleaned to remove residual flammable liquid products and pumped clear.
 2. Fifteen pounds of dry ice per one thousand gallons of liquid capacity of the tank shall be inserted into the tank in order to purge residual flammable vapors from the tank. A receipt for the dry ice shall be provided to the Fire Marshal in order to document the required quantity.
- I. Fire District to witness vapor reading prior to tank removal. Vapor monitoring equipment to be provided by the removal contractor. Tank excavation shall be witnessed by the Fire District.
- J. All tanks shall be manifested as hazardous waste and transported to a Department of Health Services permitted UST salvage/disposal facility unless laboratory testing has been conducted which certifies the tanks(s) are not hazardous waste. Documentation must be provided prior to removal to the Fire Marshal for review.
- K. The exterior of all tanks are to be clean and free of back fill material of visible contamination. In order to accomplish this, tanks may be required to be wrapped in plastic visqueen prior to leaving the site.
- L. The following information will be required to be obtained at the time of inspection:
1. Tank UL numbers
 2. Waste hauler, company address and phone number, ID and EPA number, Waste Destination, company address and phone number, ID and EPA number, Hazardous waste manifest number.

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3. Tank hauler, company address and phone number, ID and EPA number,
Tank Destination, company address and phone number, ID and EPA number,
Hazardous waste manifest number.
4. Name of environmental consultant, company address and phone number.

Note: No cold or hot cutting is permitted on any tank within the jurisdictional boundaries of the Novato Fire Protection District.

Exception: When written permission has been granted by the Fire District, cold cutting only may be permitted under close Fire District supervision, and relative to specific nationally recognized safe practices conditioned on the Fire Department Permit.

Referenced Standards:

National Fire Protection Association Standard No. 327
American Petroleum Institute